

Docket No.: 235208US0

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: :

Beatrice PERRON, et al. : EXAMINER: DELCOTTO, G.

SERIAL NO.: 10/718.531 :

FILED: NOVEMBER 24, 2003 : GROUP ART UNIT: 1751

FOR: COSMETIC COMPOSITION CONTAINING  
MINERAL PARTICLES AND A  
POLYETHYLENEIMINE

DECLARATION UNDER 37 C.F.R. 1.132

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

SIR:

I, Estelle MATHONNEAU, hereby declare:

1. I am employed by L'ORÉAL as an engineer and have experience in the field of preparing and analyzing compositions.
2. The following experiments were carried out by me or under my direct supervision and control.
3. The following compositions were prepared.

	Invention Composition A	Comparative Composition B
TEA-Lauryl sulfate in aqueous solution (40% active material)	12.5 g (AM)	12.5 g (AM)

Cocamidopropyl-Betaine (Tego-Betaine F50 from Goldschmidt)	2.5 g (AM)	2.5 g (AM)
Polyethyleneimine (Lupasol G35 from BASF)	0.2 g (AM)	0.8 g (AM)
Calcium carbonate (powder) (Omyapur 35 from Omya)	5 g	5 g
Acrylic polymer (Aqua SF 1 from Noveon)	1.8 g (AM)	1.8 g (AM)
pH adjuster (qs)	pH 7	pH 7
Preservatives	qs	qs
NaCl	1.5 g	1.5 g
Water (qsp)	Qsp to 100	Qsp to 100

These compositions were virtually identical except for the amount of polyethyleneimine (PEI) present. Invention Composition A contained PEI and solid mineral particles in a ratio of 0.04, and Comparative Composition B contained PEI and solid mineral particles in a ratio of 0.16.

4. The following experiment was performed using both of these compositions: 1 gram of each composition was applied to virgin hair locks (20 cm long, 2.7 g weight) for 5 minutes. The hair was rinsed, and then dried for 30 minutes at 70°C.

5. Next, the smoothness of the dried hair locks was evaluated by ten experts using the following scale: 0 corresponded to very bad smoothness (no slip, great difference between the root and the end of the hair), while 5 corresponded to very good smoothness (good slip, no difference between the root and the end of the hair, touch was homogeneous and not loaded) .

Thus, the higher the number resulting from this evaluation, the better smoothness properties the composition possessed. Such evaluative methods are commonly used in the cosmetics industry generally and in our laboratories specifically. The results of the testing are set forth in the following table.

	Invention composition A	Comparative Composition B
Smoothness of dried hair (mean)	3.2	1.6

The experts noted a marked improvement of the smoothness of hair treated with invention composition A. Surprisingly, however, comparative composition B possessed extremely poor smoothness properties. In particular, it was surprising that comparative composition B which contained PEI/solid mineral particles in a ratio of 0.16 contained worse smoothness properties than invention composition A. This demonstrated that the combination of PEI and solid mineral particles does not always or necessarily result in improved smoothness properties.

6. The invention composition imparted hair with vastly different smoothness properties compared to the comparative composition. This vast difference in cosmetic properties was surprising and unexpected given the similarity of the compositions.

7. The improved smoothness properties obtained with the invention composition are representative of the present invention. That is, I would expect shampoo or conditioner compositions containing a cosmetically acceptable medium, solid mineral particles comprising at least one element selected from the group consisting of columns IIa, IIIa and IVa of the Periodic Table of the Elements, wherein the particles comprise at least 50% by weight of calcium carbonate, and at least one polyalkyleneimine, wherein the polyalkyleneimine/mineral particle weight ratio is 0.05-0.001, to possess improved

smoothness properties like those of the exemplified invention composition. I have no reason to expect otherwise.


8. The difference in smoothness properties between the invention composition and the comparative composition demonstrates the surprising and unexpected benefit derived from having the claimed solid mineral particles and the claimed PEI in the required ratio in the invention composition.

9. The improved smoothness properties associated with the invention composition are commercially significant. Clearly, shampoos or conditioners which increase the smoothness properties of hair to which they have been applied are more commercially viable than shampoo or conditioner compositions which do not provide hair with increased smoothness upon application.

10. The undersigned petitioner declares further that all statements made herein of her own knowledge are true and that all statements made on information and belief are believe to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of this application or any patent issuing thereon.

11. Further deponent sayeth not.

MATHONNEAU Estelle  
Name

  
Signature

11/05/09.  
Date